

### Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

#### Listing of Claims:

1. (Currently Amended) A light-emitting semiconductor component comprising a monolithically produced sequence of semiconductor layers, which comprise:

an area of n-doped semiconductor layers;

an area of p-doped semiconductor layers following the area of n-doped semiconductor layers;

a first pn junction formed between the n-doped area and the p-doped area;

an insulating section dividing the first pn junction into a light-emitting section and a protective-diode section, wherein the insulating section electrically insulates the light-emitting section and the protective-diode section from one another in the area of p-doped semiconductor layers, and

an n-doped semiconductor portion provided in the protective-diode section and on a side of the area of p-doped semiconductor layers facing away from the first pn junction,

wherein the n-doped semiconductor portion forms a second pn junction with a first portion of the area of p-doped semiconductor layers in the protective-diode section and is electrically conductively connected to a second portion of the area of p-doped semiconductor layers in the light-emitting section, and

wherein the first pn junction has a larger area in the protective-diode section than in the light-emitting section by at least a factor of 100.

2. (Cancelled).

3. (Previously Presented) The light-emitting semiconductor component as claimed in claim 1, wherein the sequence of semiconductor layers is applied to a semiconductor substrate.

4. (Previously Presented) The light-emitting semiconductor component as claimed in claim 3, further comprising a first contact metallization applied to a side of the semiconductor substrate facing away from the sequence of semiconductor layers, and a second contact metallization applied to a surface of the sequence of semiconductor layers opposite to the semiconductor substrate.

5. (Previously Presented) The light-emitting semiconductor component as claimed in claim 1, wherein the area of n-doped semiconductor layers is only partially interrupted by the insulating section or is not interrupted at all.

6. (Previously Presented) The light-emitting semiconductor component as claimed in claim 3, wherein the insulating section extends from a surface of the sequence of semiconductor layers opposite to the semiconductor substrate into the area of n-doped semiconductor layers.

7. (Previously Presented) The light-emitting semiconductor component as claimed in claim 1, wherein the light-emitting section is formed by a vertical cavity surface emitting laser (VCSEL).

8. (Previously Presented) The light-emitting semiconductor component as claimed in claim 7, wherein the first pn junction is arranged between a first sequence of Bragg reflector layers and a second sequence of Bragg reflector layers, and wherein each of the first and second sequences has a multiplicity of layer pairs, and the two sequences of Bragg reflector layers form

a laser resonator, one of the two sequences of the Bragg reflector layers being semitransparent for a laser radiation generated in the first pn junction.

9. (Previously Presented) The light-emitting semiconductor component as claimed in claim 8, wherein in one of the two sequences of Bragg reflector layers, at least one current aperture is provided for spatially limiting an operating current flowing through the first pn junction in the light-emitting section during operation of the vertical cavity surface emitting laser.

10. (Previously Presented) The light-emitting semiconductor component as claimed in claim 4, wherein the second contact metallization partially covers a surface of the light-emitting section in such a manner that an uncovered area of the light-emitting section remains as light exit opening.

11. (Previously Presented) The light-emitting semiconductor component as claimed in claim 1, wherein the insulating section is constructed as a trench.

12. (Currently Amended) The light-emitting semiconductor component as claimed in claim 11, wherein the light-emitting section and the protective-diode section have a mesa-shaped structure on ~~[[the]]~~ a side of the trench.

13. (Previously Presented) The light-emitting semiconductor component as claimed in claim 11, wherein the trench is bounded by areas which are provided with an insulating layer.

14. (Previously Presented) The light-emitting semiconductor component as claimed in claim 4, wherein the trench is filled with a material from which the second contact metallization is formed.

15. (Previously Presented) The light-emitting semiconductor component as claimed in claim 1, wherein the insulating section is formed by an implantation, diffusion or oxidation process.

16. (Cancelled).

17. (Previously Presented) A light-emitting semiconductor component comprising a monolithically produced sequence of semiconductor layers, which comprise:

an area of n-doped semiconductor layers;

an area of p-doped semiconductor layers following the area of n-doped semiconductor layers;

a first pn junction formed between the areas;

an insulating section dividing the first pn junction into a light-emitting section and a protective-diode section, wherein the insulating section electrically insulates the light-emitting section and the protective-diode section from one another in the area of p-doped semiconductor layers,

an n-doped semiconductor provided in the protective-diode section on a side of the area of p-doped semiconductor layers facing away from the first pn junction, wherein the n-doped semiconductor portion forms a second pn junction with a first portion of the area of p-doped semiconductor layers in the protective-diode section and is electrically conductively connected to a second portion of the area of p-doped semiconductor layers in the light-emitting section, and

wherein the first pn junction in the area of the protective-diode section is short circuited.

18. (Previously Presented) The light-emitting semiconductor component as claimed in claim 17, wherein an electrically conductive layer is applied to a side edge of the sequence of semiconductor layers facing the protective-diode section and electrically connects the area of n-doped semiconductor layers and the area of p-doped semiconductor layers with one another.

19. (Currently Amended) A light-emitting semiconductor component comprising a monolithically produced sequence of semiconductor layers, which comprise:

an area of p-doped semiconductor layers;

an area of n-doped semiconductor layers following the area of p-doped semiconductor layers;

a first pn junction formed between the p-doped area and the n-doped area;

an insulating section dividing the first pn junction into a light-emitting section and a protective-diode section, wherein the insulating section electrically insulates the light-emitting section and the protective-diode section from one another in the area of n-doped semiconductor layers, and

a p-doped semiconductor portion provided in the protective-diode section and on a side of the area of n-doped semiconductor layers facing away from the first pn junction,

wherein the p-doped semiconductor portion forms a second pn junction with a first portion of the area of n-doped semiconductor layers in the protective-diode section and is electrically conductively connected to a second portion of the area of n-doped semiconductor layers in the light-emitting section, and

wherein the first pn junction has a larger area in the protective-diode section than in the light-emitting section by at least a factor of 100.

20. (New) A light-emitting semiconductor component comprising a monolithically produced sequence of semiconductor layers, which comprise:

an area of n-doped semiconductor layers;

an area of p-doped semiconductor layers following the area of n-doped semiconductor layers;

a first pn junction formed between the areas;

an insulating section dividing the first pn junction into a light-emitting section and a protective-diode section; and

an n-doped semiconductor provided in the protective-diode section on a side of the area of p-doped semiconductor layers facing away from the first pn junction;

wherein the first pn junction in the area of the protective-diode section is short circuited,

wherein the insulating section is constructed as a trench bounded by an insulating layer, whereby the insulating section electrically insulates the light-emitting section and the protective-diode section from one another in the area of p-doped semiconductor layers,

wherein the trench is filled with a material forming a contact metallization, and

wherein the n-doped semiconductor portion forms a second pn junction with a first portion of the area of p-doped semiconductor layers in the protective-diode section and is electrically conductively connected to a second portion of the area of p-doped semiconductor layers in the light-emitting section.